

# EnvironmentalChemistry.com

*Environmental, Chemistry & Hazardous Materials News, Careers & Resources*

## Chemical Database

### Ammonium, hexadecyltrimethyl-, bromide

#### Identifications

- **CAS Number:** 57-09-0
- **Caswell Number:** 167
- **Synonyms/Related:**
  - (1-Hexadecyl) trimethylammonium bromide
  - 1-Hexadecanaminium, N,N,N-trimethyl-, bromide
  - 1-Hexadecyltrimethylammonium bromide
  - Ammonium, hexadecyltrimethyl-, bromide
  - Bromat
  - Bromat (VAN)
  - Bromure de cetrimonium [INN-French]
  - Bromuro de cetrimonio [INN-Spanish]
  - C11275
  - Centrmonium bromide
  - Cetaflon
  - Cetarol
  - Cetavlon
  - Cetrimonii bromidum [INN-Latin]
  - Cetrimonio bromuro [DCIT]
  - Cetrimonium bromide
  - Cetrimonium bromide [INN]
  - Cetyl trimethyl ammonium bromide
  - Cetyltrimethylammonium bromide
  - Hexadecyl trimethyl ammonium bromide
  - Hexadecyltrimethylammonium Bromide
  - Lauroseptol
  - N,N, N-Trimethylcetylammmonium bromide
  - N,N,N-Trimethyl-1-hexadecanaminium bromide
  - N,N,N-Trimethylcetylammmonium bromide
  - N,N,N-trimethylhexadecan-1-aminium bromide
  - N-Cetyltrimethylammonium bromide
  - N-Hexadecyl-N,N, N-trimethylammonium bromide
  - N-Hexadecyl-N,N,N-trimethylammonium bromide
  - N-HEXADECYLTRIMETHYLAMMONIUM BROMIDE
  - Palmityltrimethyl ammonium bromide
  - Trimethylcetylammmonium bromide
  - Trimethylhexadecylammmonium bromide

#### Related Resources

- **USDOT Hazardous Materials Table 49 CFR 172.101**  
An online version of the USDOT's listing of hazardous materials from 49CFR 172.101. This table can be sorted by proper shipping name, UN/NA ID and/or by primary hazard class/division.
- **2004 ERG (Emergency Response Guidebook)**  
Have you ever wondered what those four digit numbers on the placards on the side of trucks and rail cars mean? Our online 2004ERG will give you your answer. This is an online version of the guidebook produced by the USDOT for first responders during the initial phase of a Dangerous goods/HazMat incident.
- **US DOT Hazardous Materials Transportation Placards**  
Hazardous materials placards (DOT placards) are required when shipping hazardous materials in the United States, Canada and Mexico. These pages provide US DOT definitions for each hazmat placard.
- **Guide for Handling Household Chemicals**  
Things you can do to make your home safer.
- **Molarity, Molality and Normality**  
Introduces stoichiometry and explains the differences between molarity, molality and normality.

- **Molar Mass Calculations and Javascript Calculator**

Molar mass calculations are explained and there is a JavaScript calculator to aid calculations.

- **Periodic Table of Elements**

Provides comprehensive data for each element of the periodic table of elements including up to 40 properties, names in 10 languages and common chemical compounds. Information also provided for 3,600 nuclides and 4,400 nuclide decay modes.

**Editor's note:** Some chemicals in this database contain more information than others due to the original reason this information was collected and how the compilation was accomplished.

While working with material safety data sheets (MSDS), I found that manufacturers sometimes used obscure names for constituent chemicals and I didn't always have a good idea of what I was dealing with. To resolve this problem, over the years, I compiled chemical names and identifiers into a personal database, cross referencing regulatory and health safety information when possible. Colleagues and friends eventually started suggesting that I make my data available on this website so that others could benefit from my efforts -- which I finally did in 2004. The more common, regulated and/or hazardous a chemical is, the more information I will have likely collected it.

**Further notes are below.**

#### Trademarks

If you are aware of any synonyms listed above that are registered trademarks, please contact us with relevant information so that trademarks can be appropriately noted.

#### Notes about mixtures

Some chemicals listed in this database are not pure chemical compounds, rather they are mixtures/solutions of chemicals. It is not uncommon for wide range of molar ratios of a mixture to be lumped together as "synonyms" of the same "chemical". In some instances chemicals that are very similar from a health & safety and/or regulatory standpoint also may have been lumped together.

#### Reference Sources

Data for this database was compiled from: hundreds of Material Safety Data Sheets (MSDS) of common industrial and household products; the Hazardous Materials Table from the United States "Code of Federal Regulations" title 49 section 172.101; the National Institute for Occupational Safety and Health Pocket Guide to Chemical Hazards; the US DOT 1996, 2000 & 2004 Emergency Response Guidebooks; U.S. National Library of Medicine and many other related resources.

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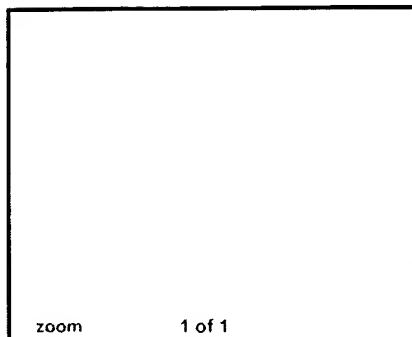
To ensure regulatory compliance when transporting hazardous materials or dangerous goods, one must receive proper training and certification from a qualified instructor and refer to the current year's Code of Federal Regulations Title 49 (49CFR) or your country's shipping regulations. In matters regarding workplace safety, refer to current OSHA regulations (29CFR) and NIOSH guidelines or your own country's health and safety regulations. No one should ever enter into a hazardous environment without proper training from qualified instructors.

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zoom 1 of 1

**Synonym**

Cetrimonium bromide

Cetyltrimethylammonium bromide

CTAB

Palmityltrimethylammonium bromide

**Molecular Formula** $\text{CH}_3(\text{CH}_2)_{15}\text{N}(\text{Br})(\text{CH}_3)_3$ **Molecular Weight**

364.45

**CAS Number**

57-09-0

**Beilstein Registry Number**

3598189

**EG/EC Number**

2003113

**MDL number**

MFCD00011772

**PubChem Substance ID**

24895714

[Expand/Collapse All](#)**Price and Availability****Click For Pricing and Availability****Descriptions****Application**

Cationic surfactant

**Properties****assay** $\geq 98\%$ **form**

powder

**color**

white

**mp**

248-251 °C(lit.)

**solubility** $\text{H}_2\text{O}$ : 50 mg/mL**References****Reference**Murray, M.G. and Thompson, W.F., Rapid isolation of high molecular weight plant DNA. *Nucleic Acids Res.* **8**, 4321-4325, (1980)Graff, G., et al. *J. Pharmacol. Toxicol. Methods* **39**, 169, (1998)Gettar, R.T., et al. *J. Chromatogr. A.* **855**, 111, (1999)D.E. Townsend, Rapid isolation from *Staphylococcus aureus* of relaxable and non-relaxable plasmid DNA for in vitro manipulation. *Lett. Appl. Microbiol.* **1**, 87, (1985)**Merck***Merck* **13,2034****Beilstein***Beil.* **4,IV,819****Fieser***Fieser* **15,77****reference***Aldrich MSDS* **1**, 363:D / *Corp MSDS* **1** (1), 718:C / *FT-IR* **2** (1), 618:D / *FT-IR* **1** (1), 394:D / *IR-Spectra* (3), 230:H / *IR-Spectra* (2), 206:A / *NMR-Reference* **2** (1), 344:A / *RegBook* **1** (1), 419:J / *Sax* **6**, 1511 / *Sigma FT-IR* **1** (2), 67:B / *Structure Index* **1**, 61:C:5**Safety**

<b>Hazard Codes</b>	Xn,N
<b>Risk Statements</b>	22-37/38-41-50
<b>Safety Statements</b>	26-39-61
<b>RIDADR</b>	UN 3077 9/PG 3
<b>WGK Germany</b>	3
<b>RTECS</b>	BQ7875000
<b>F</b>	3

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